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<u>Abstract</u>

A polythioether includes a structure having the formula I

$$-R^{1}-[-S-(CH_{2})_{2}-O-[-R^{2}-O-]_{m}-(CH_{2})_{2}-S-R^{1}-]_{n}-$$

- 5 wherein
 - denotes a divalent C_{2-6} n-alkyl, C_{3-6} branched alkyl, C_{6-8} cycloalkyl or C_{6-10} R^1 alkylcycloalkyl group, or $-[(-CH_2-)_p-X-]_q-(-CH_2-)_r-$,
 - R^2 denotes methylene, a divalent C_{2-6} n-alkyl, C_{2-6} branched alkyl, C_{6-8} cycloalkyl or C_{6-10} alkylcycloalkyl group, or $-[(-CH_2-)_p-X-]_q$ $-(-CH_2-)_r-$,
- 10 Χ denotes one selected from the group consisting of O, S and -NR6,
 - R^6 denotes H or methyl,
 - m is a rational number from 0 to 10,
 - n is an integer from 1 to 60,
 - is an integer from 2 to 6, р
- 15 is an integer from 0 to 5, and
 - is an integer from 2 to 10.

The polythioether is a liquid at room temperature and pressure.